

Advanced Light Armament for Combat Vehicles

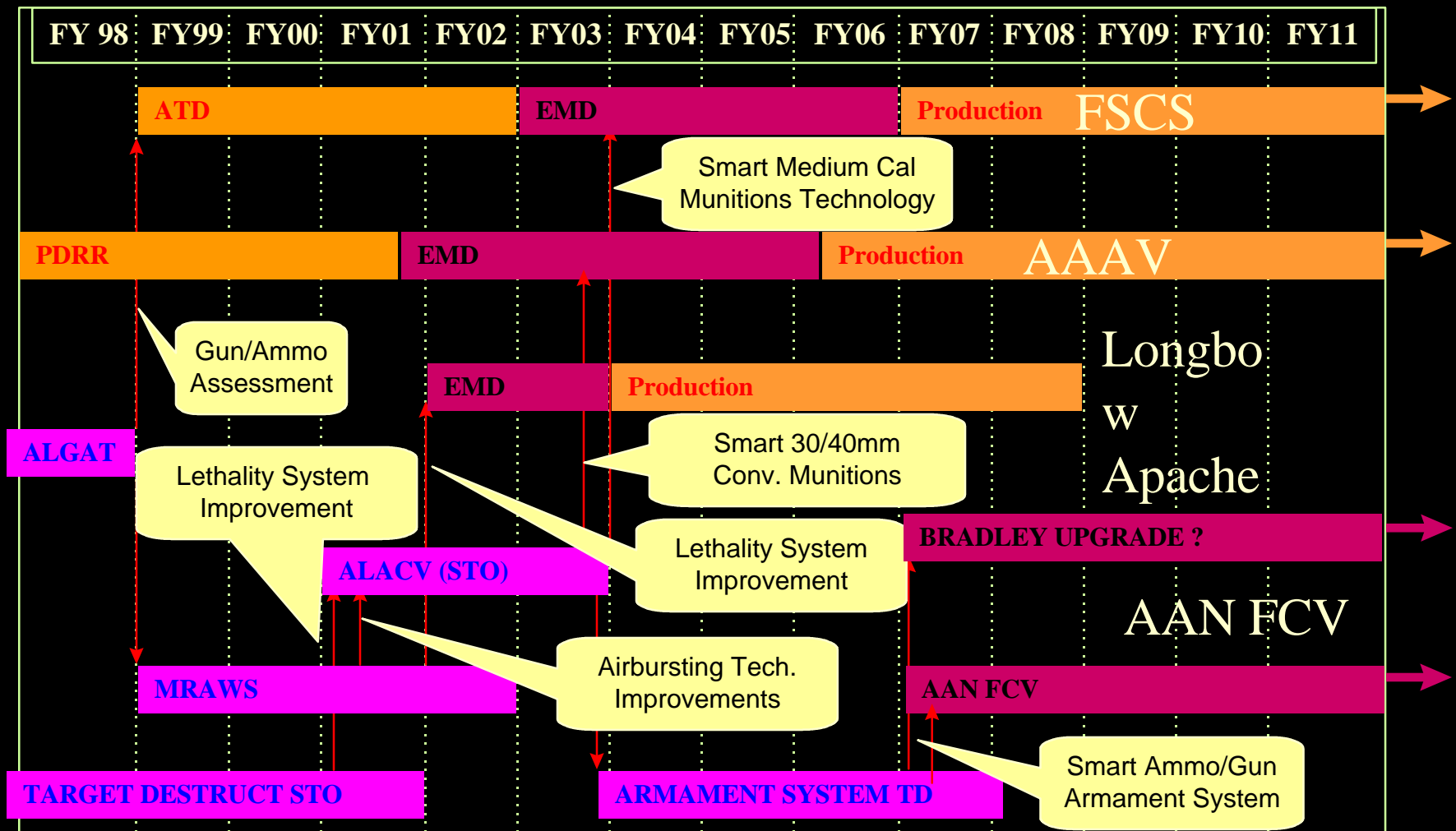


34th Annual NDIA Gun &
Ammunition Symposium

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Tech Base Programs

Medium Caliber Combat Vehicle Road Map



Threat

- NGIC position on LAV threat platforms indicates:
 - Cheap upgrades to current vehicles available
 - Overmatch timeline is moving to the left
- Increasingly urban engagements
- Current systems at limit of capability
-



Platform Lethality Requirements

- *The Common Thread*

- Infantry targets
- LAV targets
- Self Air Defense
- Kill at greater range
 - More accurate
 - More lethal

- *Affordability*

- Insensitive Munitions
- Depleted Uranium Issues
- Lighter vehicles

Key Technologies



- Airbursting Munitions (both Aviation and Combat Vehicle) and associated FC system improvements
- Supershot Family of Ammunition
 - Longrod and Airburst
- Cased Telescoped Technology
 - Longrod and Airburst
- ETC Technology
- Guided Medium Caliber Munitions Technology
- Advanced Fuzing and Multi-Function Warheads
- MEMs / MIC
- Insensitive Munitions
- Alternatives to DU

Tech Base Programs:

Advanced Light Armament for Combat Vehicles ARD-07 (FY01-03)

- FSCS
- Bradley
- FCS
- AAVV

Rod and Tube Designs
Advanced Materials

KE Rods
Materiel
Novel Penetrators



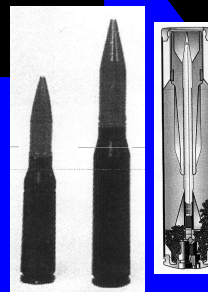
Bursting Munitions

OCSW/OICW
European candidates

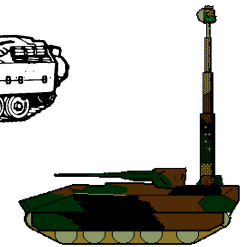
Leveraging on-going technologies for future combat vehicle needs

Goals:
Demonstrate enhanced anti-armor/personnel effects to meet multiple User lethality requirements

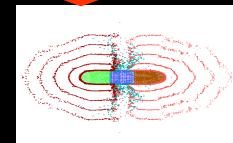
Supershot Technology



25mm
35mm
40mm CTA

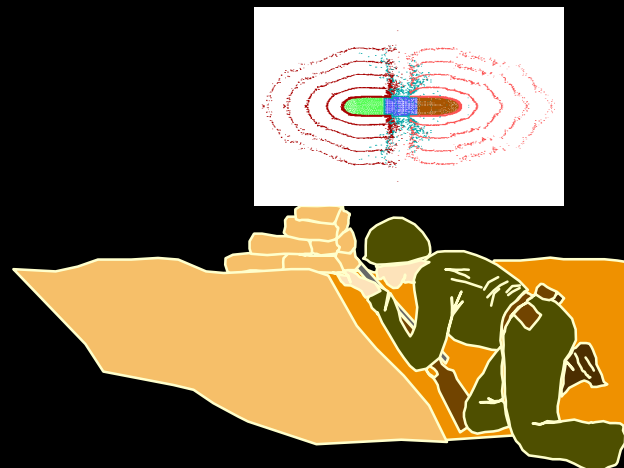


Providing Enhanced Anti-Armor/Personnel Effects for Ground Combat Vehicles



Medium Caliber Status Ammunition

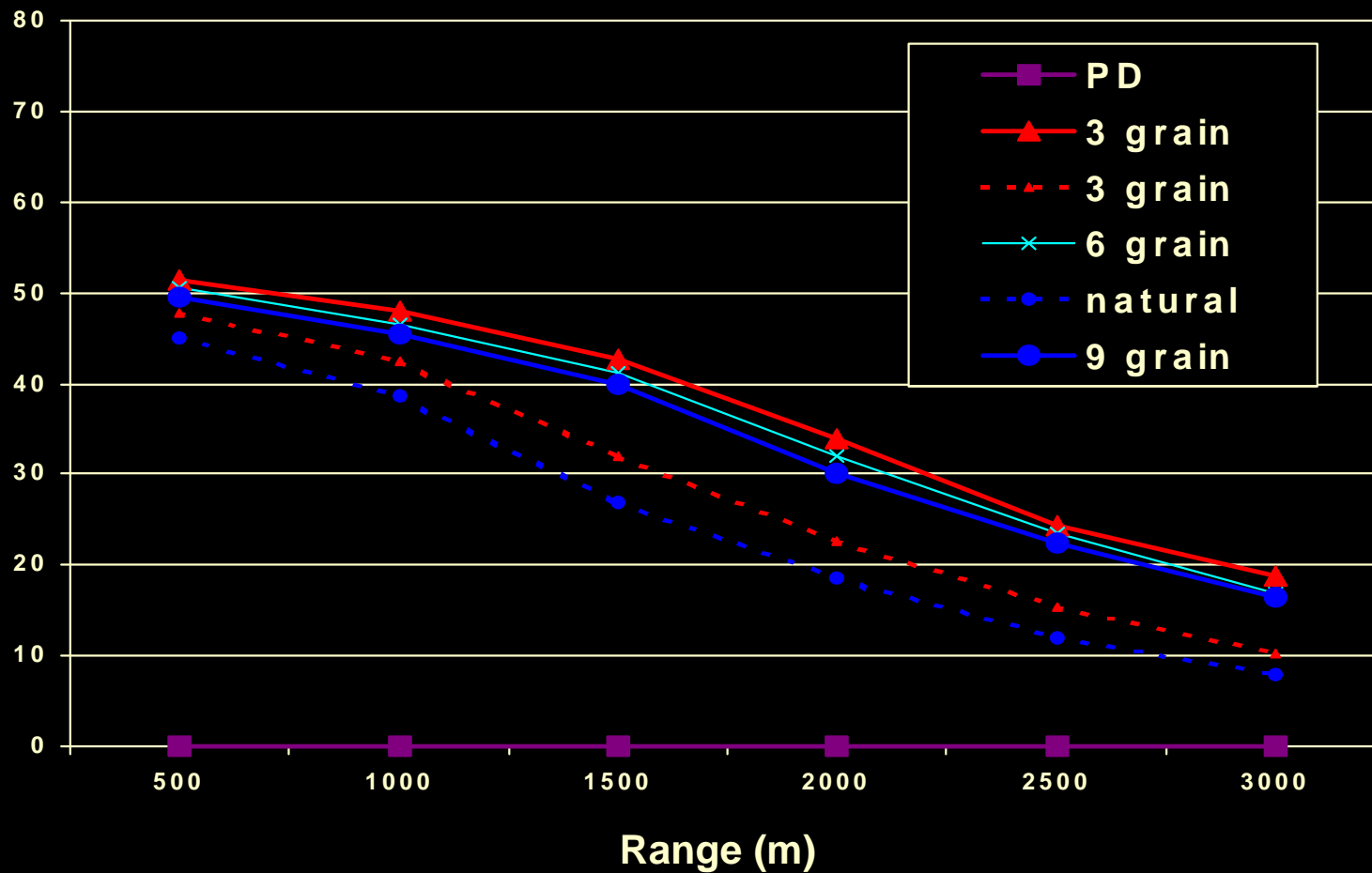
- ➔ **New technology for Medium Caliber**
- ➔ **Airbursting Munitions**
 - Inductively set timed fuze system
 - Fragmenting Projectile containing Tungsten pellets
 - Effectiveness increases with larger caliber



Range of Performance

8-man Squad (50m x 10m Area)
2 rounds/burst (16 total rounds fired)

Prone Protected Posture - 30s Assault Stowed Kills (Incapacitation)



** aimpoint is each individual soldier

KE Penetrator Advancements



- Study DU alternatives
- Examine rod and tube designs
- Study materials improvements



Supershot Technology

30mm → 40mm SS
35mm → 50mm SS
Bushmaster II & III

Equivalent
Length



Greater
Volume

Same Base
Diameter

Level of Effort



Airbursting Munitions

56%

Advanced KE

26%

Supershot Technology

18%

Summary



- ALACV STO has strong user support at Ft. Benning and Ft. Knox.
- Will coordinated with work being done by USMC.
- Significant start for improving medium caliber systems
- Supports future systems